



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

D2230-3

Job Sheet 170990



Part No: D2230-3

Job Qty: 240 ea

Part Name: Mounting Lug



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 1/25/18

Job Tracking No:

Due Date: 2/2/18

Created By: Linda Lacelle

Type: Stock

Description:

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Purchasing	240 pcs		2/1/18	0.00	0.00	Purchasing		AT 18/02/01
120	Packaging	240 pcs		2/1/18	0.00	0.00	Packaging2		AT 18/02/01
130	QC	240 pcs		2/1/18	0.00	0.00	QC6		AT 18/02/01
140	HandFinish	240 pcs		2/1/18	0.00	1.51	HandFinish1		FEB 0 2 2018
150	QC	240 pcs		2/1/18	0.00	0.00	QC7		
160	Powdercoat	240 pcs		2/2/18	0.00	1.80	Powdercoat1		
170	QC	240 pcs		2/2/18	0.00	0.00	QC3		
180	Packaging	240 pcs		2/2/18	0.00	0.00	Packaging3		STL
190	QC21-SA	240 Ea		2/2/18	0.00	0.00	QC21		ST521

Part Op 90 - Issue P/O to Metec: 038884

Descriptions: 120 - Ensure C of C is attach

160 - START TIME:

190 - Original B/N is 148845 - w/o was closed and costed D2230-3 D2230-3

JAN 26 2018

DAS 21 FEB 0 5 2018

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
D2230-3P	Lug	240 pcs (1 ea)	90-Purchasing	
D2423	Lug Extrusion	16.3920 ft (.0683 ea)	90-Purchasing	

10.928 B160522

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
90-Purchasing	D2230-3P	240	0	0
	D2423	16	829	0

Part Specifications

Specifications could not be found.

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

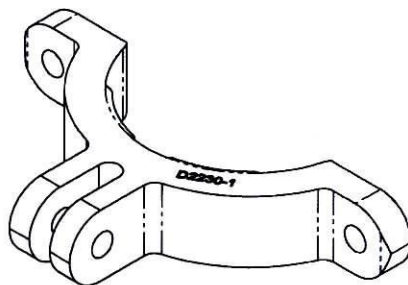


QA Closed: _____ Date: _____

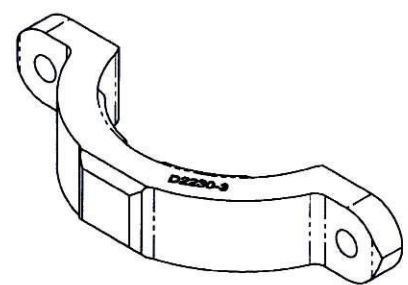
Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____ Date : _____ Step # _____	DISPOSITION Rework ☐ Scrap ☐ Skid-tube ☐ Machining ☐ Thermoforming ☐	AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td>Cross tube ☐</td> <td>Water Jet ☐</td> <td>Engineering ☐</td> </tr> <tr> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td></td> <td>Supplier ☐</td> <td></td> </tr> </table>		Cross tube ☐	Water Jet ☐	Engineering ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐		Supplier ☐																																					
Cross tube ☐	Water Jet ☐	Engineering ☐																																																	
Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																																																	
Finishing ☐	Rec/Store/Packaging ☐	Other ☐																																																	
	Supplier ☐																																																		
Description Work Order _____		Job No: 170990 Mfg Date: 02/01/18 Purchasing Change No: Operation: Revision: Original Serial #: S038157 PART NO: D2230-3 S038157 DART AEROSPACE Mounting Lug 1270 Aberdeen Street Hawkesbury, ON K6A 1K7 CANADA TEL: 1 613 632-5200 Email: sales@dartaero.com www.dartaerospace.com																																																	
Root Cause <table style="width: 100%;"> <tr> <td>Environment ☐</td> <td>No Re-verification ☐</td> </tr> <tr> <td>Design ☐</td> <td>Operator ☐</td> </tr> <tr> <td>Doc/Data ☐</td> <td>Offset/Setup ☐</td> </tr> <tr> <td>Equip/Tooling ☐</td> <td>Supplier ☐</td> </tr> <tr> <td>Handling/Pre ☐</td> <td>Training ☐</td> </tr> <tr> <td>Material ☐</td> <td>Use for Testing ☐</td> </tr> <tr> <td>Internal Transport ☐</td> <td>Poor Information ☐</td> </tr> <tr> <td>Tribal Knowledge ☐</td> <td>Rushing ☐</td> </tr> <tr> <td>LOA ☐</td> <td>Product Improvement ☐</td> </tr> <tr> <td>Substation ☐</td> <td>Process Improvement ☐</td> </tr> <tr> <td>Past Expiry Date ☐</td> <td>Manufacturing Process ☐</td> </tr> <tr> <td>Misidentified ☐</td> <td>Past Due ☐</td> </tr> </table>		Environment ☐	No Re-verification ☐	Design ☐	Operator ☐	Doc/Data ☐	Offset/Setup ☐	Equip/Tooling ☐	Supplier ☐	Handling/Pre ☐	Training ☐	Material ☐	Use for Testing ☐	Internal Transport ☐	Poor Information ☐	Tribal Knowledge ☐	Rushing ☐	LOA ☐	Product Improvement ☐	Substation ☐	Process Improvement ☐	Past Expiry Date ☐	Manufacturing Process ☐	Misidentified ☐	Past Due ☐	<table style="width: 100%;"> <tr> <td>Centre Not Concentric ☐</td> <td>BOM/Route ☐</td> <td>Weld ☐</td> </tr> <tr> <td>Cracks ☐</td> <td>Broken/Damage/Defect ☐</td> <td>Wrong Stock Pulled ☐</td> </tr> <tr> <td>Crimp/Kink/Ripple/Wave ☐</td> <td>Inspection Incomplete/Unqualified ☐</td> <td>Out of Sequence ☐</td> </tr> <tr> <td>Cuffs ☐</td> <td>Contamination ☐</td> <td>Off-set ☐</td> </tr> <tr> <td>Crushing ☐</td> <td>Countersink ☐</td> <td>Mislabeled ☐</td> </tr> <tr> <td>Heat Treat ☐</td> <td>Cut Too Short ☐</td> <td>Fit/Function ☐</td> </tr> <tr> <td>Wave/Twist in Tube ☐</td> <td>Instructions Incomplete/Unclear ☐</td> <td>Misaligned/off center ☐</td> </tr> <tr> <td>Marks/Chatter ☐</td> <td>Drill Holes ☐</td> <td></td> </tr> </table>		Centre Not Concentric ☐	BOM/Route ☐	Weld ☐	Cracks ☐	Broken/Damage/Defect ☐	Wrong Stock Pulled ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Out of Sequence ☐	Cuffs ☐	Contamination ☐	Off-set ☐	Crushing ☐	Countersink ☐	Mislabeled ☐	Heat Treat ☐	Cut Too Short ☐	Fit/Function ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Misaligned/off center ☐	Marks/Chatter ☐	Drill Holes ☐	
Environment ☐	No Re-verification ☐																																																		
Design ☐	Operator ☐																																																		
Doc/Data ☐	Offset/Setup ☐																																																		
Equip/Tooling ☐	Supplier ☐																																																		
Handling/Pre ☐	Training ☐																																																		
Material ☐	Use for Testing ☐																																																		
Internal Transport ☐	Poor Information ☐																																																		
Tribal Knowledge ☐	Rushing ☐																																																		
LOA ☐	Product Improvement ☐																																																		
Substation ☐	Process Improvement ☐																																																		
Past Expiry Date ☐	Manufacturing Process ☐																																																		
Misidentified ☐	Past Due ☐																																																		
Centre Not Concentric ☐	BOM/Route ☐	Weld ☐																																																	
Cracks ☐	Broken/Damage/Defect ☐	Wrong Stock Pulled ☐																																																	
Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Out of Sequence ☐																																																	
Cuffs ☐	Contamination ☐	Off-set ☐																																																	
Crushing ☐	Countersink ☐	Mislabeled ☐																																																	
Heat Treat ☐	Cut Too Short ☐	Fit/Function ☐																																																	
Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Misaligned/off center ☐																																																	
Marks/Chatter ☐	Drill Holes ☐																																																		
OTHER : ☐		<table style="width: 100%;"> <tr> <td>☐ Positioned Wrong</td> </tr> <tr> <td>☐ Outside Dimensions</td> </tr> <tr> <td>☐ Over/Under tolerance</td> </tr> <tr> <td>☐ Part Incorrect</td> </tr> <tr> <td>☐ Part Lost/Missing</td> </tr> <tr> <td>☐ Part Moved</td> </tr> <tr> <td>☐ Drawing</td> </tr> <tr> <td>☐ Finish</td> </tr> <tr> <td>☐ Misread</td> </tr> <tr> <td>☐ Turning Sequence</td> </tr> </table>		☐ Positioned Wrong	☐ Outside Dimensions	☐ Over/Under tolerance	☐ Part Incorrect	☐ Part Lost/Missing	☐ Part Moved	☐ Drawing	☐ Finish	☐ Misread	☐ Turning Sequence																																						
☐ Positioned Wrong																																																			
☐ Outside Dimensions																																																			
☐ Over/Under tolerance																																																			
☐ Part Incorrect																																																			
☐ Part Lost/Missing																																																			
☐ Part Moved																																																			
☐ Drawing																																																			
☐ Finish																																																			
☐ Misread																																																			
☐ Turning Sequence																																																			

over



D2230-1 MOUNTING LUG



D2230-3 MOUNTING LUG

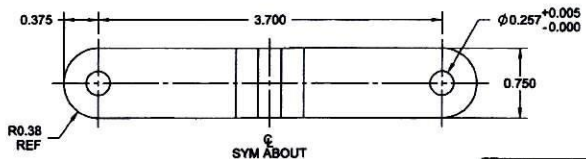
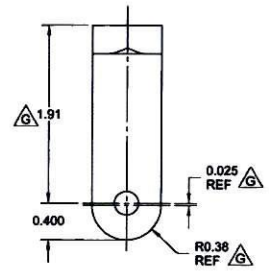
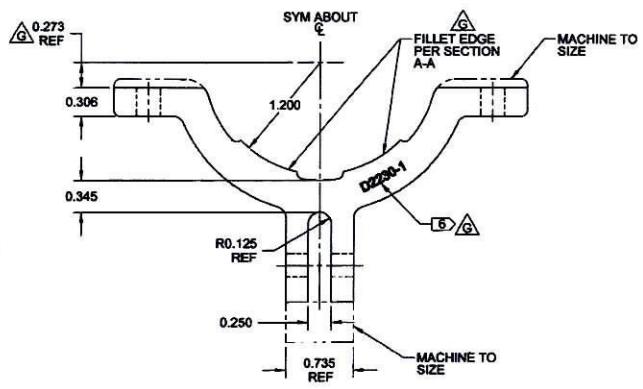
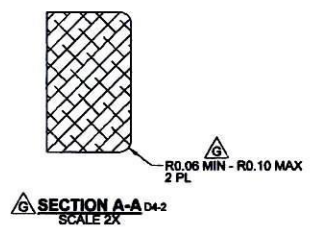
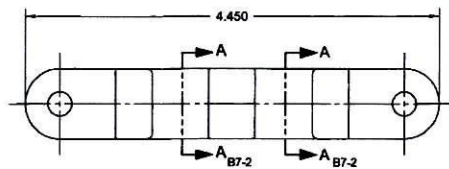
RELEASED
01/01/16



NOTES:

- 1) MATERIAL: MAKE FROM D2423 EXTRUSION
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: ENGRAVE PART NUMBER TO A DEPTH OF 0.010 ± 0.005 IN THIS LOCATION, WITH TOOL TIP RADIUS OF 0.015 ± 0.005.
- 7) WEIGHT: -1: 0.18 lbs
-3: 0.14 lbs

G	REDRAWN IN SOLIDWORKS TO CURRENT DESIGN. STANDARDS: REFER TO SECTION A-A & B-B FILLET ADDED TO PREVENT CHAFING OF RUBBER CUSHION ON INSTALLATION.	AJS	09.01.16
F	REDESIGN: R1.200 WAS 1.100	CP	99.12.13
E	RE-DESIGN	BW	95.01.04
D	RE-DESIGN	BW	95.01.04
C	RE-DESIGN	BW	94.03.30
REV.	DESCRIPTION	BY	DATE
DESIGN	BW	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	AJS		
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.		DRAWING NO. D2230	
DATE	09.01.16	REV. G	
		SHEET 1 OF 3	
		TITLE	
		SCALE	
		NTS	
COPYRIGHT © 1994 BY DART AEROSPACE LTD			
THIS DOCUMENT IS UNCLASSIFIED UNLESS OTHERWISE NOTED. IT IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT PERMISSION IN WRITING FROM DART AEROSPACE LTD.			



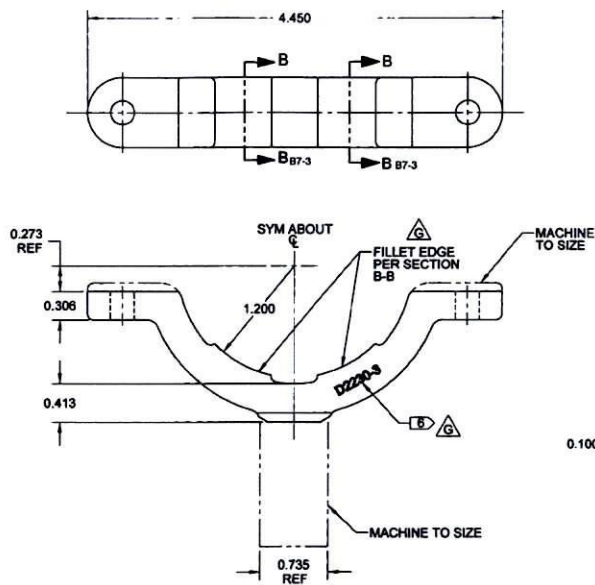
D2230-1 MOUNTING LUG

RELEASED
01/06/15

DESIGN	BW	DART AEROSPACE LTD	
DRAWN	AJS	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. G
MFG. APPR.		D2230	SHEET 2 OF 3
APPROVED		TITLE	SCALE
DE APPR.		MOUNTING LUG	NTS
DATE	09.01.16	COPYRIGHT © 1984 BY DART AEROSPACE LTD THIS DOCUMENT IS UNCLASSIFIED AND IS SUPPLIED TO THE PUBLIC ON THE BASIS OF A REQUEST FOR INFORMATION FROM THE NATIONAL ARCHIVES OF CANADA	

SECTION B-B
SCALE 2X

R0.06 MIN - R0.10 MAX
2 PL



D2230-3 MOUNTING LUG

RELEASED
09/01/16

DESIGN	BW	DART AEROSPACE LTD	
DRAWN	AJS	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. G
MFG. APPR.		D2230	SHEET 3 OF 3
APPROVED		TITLE	SCALE
DE APPR.		MOUNTING LUG	NTS
DATE	09.01.16	COPYRIGHT © 1984 BY DART AEROSPACE LTD	



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER **PO038884**

Supplier: MEM001-VC
Metec Metal Technology Inc.
20 Terry Fox Drive PO Box 781
Vankleek Hill
ON
K0B 1R0 Canada
Phone: 613 678 3957
Fax: 613 678 3956

Attention: Walz, Shigi

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

PO No: PO038884

PO Date: 1/26/18

Due Date: 2/2/18

Purchase Order

Revision:

Revision Date:

Ship-To Contact: Baker, Diane
dbaker@dartaero.com

Via: Ground

Pymt Terms: Net 30

Freight Terms:

Special Comments:

E-MAILED
JAN 29 2018

Items											
Line Item	Part	Supplier Part No	Item No	Description	Status	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1	D2230-3P			Lug As Per Dwg D2230 Rev. G Alodine and Paint as per QSI005	Firmed	2/2/18	160 pcs ✓	0 pcs 160	160 pcs	\$13.80/pcs	\$2,208.00
Line Item Note job# 170990											
2	D3235-1P			Lug As Per Dwg D3235 Rev. A Alodine and Paint as per QS 1005	Firmed	2/2/18	42 pcs ✓	0 pcs 42x	42 pcs	\$15.00/pcs	\$630.00
Line Item Note job# 170998											
3	D2230-1P			Lug As Per Dwg D2230 Rev. G Alodine and Paint as per QSI 005	Firmed	2/2/18	10 pcs ✓	0 pcs 10x	10 pcs	\$16.10/pcs	\$161.00
4	D3910-1P			Crosstube Lug As Per Dwg D3910 Rev. E Alodine and Paint as pe QSI 005	Firmed	2/2/18	20 pcs ✓	0 pcs 20x	20 pcs	\$16.10/pcs	\$322.00
Line Item Note job# 171073											
5	D3910-3P			Crosstube Lug As Per Dwg D3910 Rev. E Alodine and Paint as Per QSI 005	Firmed	2/2/18	35 pcs ✓	0 pcs 35x	35 pcs	\$16.10/pcs	\$563.50
Line Item Note job# 171074											
6	D3910-7P			Crosstube Lug As Per Dwg. D3910 Rev. E Alodine and Paint as Per QSI 005	Firmed	2/2/18	20 pcs ✓	0 pcs 20x	20 pcs	\$16.10/pcs	\$322.00
Line Item Note job# 171075											



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER

PO038884

Items

Line Item	Part	Supplier Part No	Item No	Description	Status	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
7	D2230-3P			Lug As Per Dwg D2230 Rev. G Alodine and Paint as per QSI005	Firmed	2/23/18	80 pcs	0 pcs	80 pcs	\$13.80/pcs	\$1,104.00
Line Item Note job# 171142											
8	D3235-1P			Lug As Per Dwg D3235 Rev. A Alodine and Paint as per QS I005	Firmed	2/23/18	58 pcs	0 pcs	58 pcs	\$15.00/pcs	\$870.00
Line Item Note job# 171144											
9	D2230-1P			Lug As Per Dwg D2230 Rev. G Alodine and Paint as per QSI 005	Firmed	2/23/18	90 pcs	0 pcs	90 pcs	\$16.10/pcs	\$1,449.00
Line Item Note job# 171145											
										Grand Total:	\$7,629.50

Order Notes

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Procurement Quality Clauses

- A005 RIGHT OF ENTRY
- A007 FIRST ARTICLE INSPECTION (FAI) BY SELLER, (DOCUMENTATION MAINTAINED BY SUPPLIER)
- A012 CHEMICAL AND PHYSICAL TEST REPORTS
- A016 PERSONNEL QUALIFICATION
- A017 RAW MATERIAL IDENTIFICATION (AS APPLICABLE)
- A026 CERTIFICATION OF MATERIAL CONFORMANCE
- A041 QUALITY MANAGEMENT SYSTEM
- A042 DART NOTIFICATION BY SUPPLIER
- A043 RETENTION OF QUALITY DOCUMENT

A048 COUNTERFEIT PARTS AVOIDANCE, DETECTION, MITIGATION AND DISPOSITION PROGRAM

A049 SUPPLIER AWARENESS

ag
P.B.

Plex 1/29/18 2:30 PM dart.baker.diane



20 Terry Fox Drive, Vankleek Hill, Ontario K0B 1R0

Tel. (613) 678-3957 & (613) 678-2782 Fax (613) 678-3956 metec@metec.ca

CERTIFICATE OF CONFORMITY

SOLD TO:

Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, Ont.
K6A 1K7

SHIPPED TO:

same

<u>QUANTITY</u>	<u>PART NUMBER</u>	<u>PART NAME</u>	<u>P.O. NUMBER</u>
160	D2230-3	Mounting Lug	38884
	Paint Batch # 21567 / Material Batch # 160522		
42	D3235-1	Mounting Lug	38884
	Paint Batch # 21566 / Material Batch # 160522		
10	D2230-1	Mounting Lug	38884
	Paint Batch # 21597 / Material Batch # 160522		
35	D3910-3	Crosstube Lug	38884
	Paint Batch # 21207 / Material Batch # 160522		
20	D3910-7	Crosstube Lug	38884
	Paint Batch # 20366 / Material Batch # 131451		
20	D3910-1	Crosstube Lug	38884
	Paint Batch #21566 / Material Batch # 160522		

MATERIAL: supplied by DART

We hereby certify that the above parts were made in conformance with applicable drawings.

METEC Metal Technology Inc.

Heather Nixon

Vankleek Hill, January 29, 2018